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SPACE GATEWAY SUPPORT (SGS) SGS 08860J (February 2005)  
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## DIVISION 08 - DOORS AND WINDOWS

## SECTION 08860J

## SOLAR FILM

02/05

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SECTION 08860J

SOLAR FILM  
02/05

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NOTE: This guide specification covers the  
requirements for transparent film at least 0.10 mm  
(0.004 inch thick (4 mil)) applied to the interior  
side of glass to reduce solar heat gain, spalling,  
and fragment dispersal.  
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PART 1 GENERAL

1.1 SUBMITTALS

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NOTE: Review submittal description (SD) definitions  
in Section 01300, "Submittals," and edit the  
following list to reflect only the submittals  
required for the project. Submittals should be kept  
to the minimum required for adequate quality  
control. Include a columnar list of appropriate  
products and tests beneath each submittal  
description.  
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The following shall be submitted in accordance with Section 01330,  
"Submittals," in sufficient detail to show full compliance with the  
specification:

SD-03 Product Data

Three copies of manufacturer's catalog data

SD-04 Samples

Prior to delivery of materials, submit to the Contracting Officer  
duplicate set of the various film types specified, not less than 8  
x 10 inches, and three copies of manufacturer's catalog data

1.2 PRECONSTRUCTION REQUIREMENTS AND GUARANTEE

Prior to commencement of construction, submit the following for review and  
approval:

catalog data (three copies)  
film types (samples)

Provide Manufacturer's written guarantee of professionally installed film  
with pressure-sensitive adhesives against peeling, cracking, crazing,  
loosening, fading and discoloring for 5 years.

### 1.3 TEST REPORTS

Provide manufacturer's notarized certification that materials to be supplied will comply with the specifications listed, except as otherwise indicated. Submit test reports available from the manufacturer's laboratory or from an accredited independent testing laboratory with the required film types and catalog data for approval.

## PART 2 PRODUCTS

### 2.1 REFLECTIVE WINDOW FILM

Transparent film; polyester, vacuum coated with aluminum or other metal; 0.0009 to 0.0011 inch thickness (plus adhesive thickness); and light, neutral gray, not affecting color values in the room. Tinted film; transparent, colored film, laminated to the metallic surface, approximately 0.005 inch thick. Film as manufactured by Solar-X Corporation, Type PS-80, or approved equal with the following characteristics:

Density variation, the average of light transmission across the width at all positions along the length not to exceed  $\pm 1\%$ .

Variation in total transmission across the width at any portion along the length not to exceed  $\pm 2\%$  over the average.

Range of change of total transmission across the width at any portion along the length not to exceed 1% in 4 inches.

Transparent reflective window film on clear glass displaying a shading coefficient of not greater than 0.25 visible light transmission of 15% or greater, and solar reflectance of 50% or greater.

Film using pressure-sensitive adhesives when applied to glass and mounted in a frame, meeting the break safe specifications for safety glazing as established by ANSI A97.1

Reflective window film applied to 1/8 inch clear glass having a U-value of 0.84.

Nonflammable on glass, melting point of 480° to 500° F, and will not release noxious fumes when burned or melted.

### 2.2 ADHESIVE

Factory-applied, pressure-sensitive systems. Keep optically flat prior to application by a protective polyester film that is removed and discarded. Pressure-sensitive surfaces shall meet the following requirements for vision, moisture resistance and weathering:

The view from a distance of 5 feet, at angles up to 45° from either side of the glass, shall not be distorted by the adhesive-film combination.

Sealing with a lacquer or other substance around the edges of the film shall not be necessary to prevent condensed moisture or free water from penetrating under the film.

Adhesive shall be resistant to ultraviolet degradation or discoloring.

Adhesion, under normal conditions of sunlight, humidity and extremes of temperatures, shall be retained beyond the period of the warranty.

### PART 3 EXECUTION

#### 3.1 INSTALLATION

Apply film in such a manner that will provide a uniform appearance with no streaks, banding, pin holes or thin spots with very thin, uniformly trimmed margins.

Install reflective window film in accordance with manufacturer's instructions, using authorized installers trained in this particular type of film installation.

Fit and/or seam film accurately and bond securely to glass surface. Cut film edges neatly and square coming to within 1/16 inch of the edges of the exposed glass. Upon installation, the film shall be an integral part of the glass, free of bubbles, creases or marks visible at normal viewing distances.

-- End of Section --